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To: Massachusetts Health Care Quality and Cost Council

From: Suanne Singer, President

Date: November 1, 2007

Subject: Statistical Plan for Uniform Reporting System for Health Care Claims Data Sets

Attached is the draft statistical plan for the running of a uniform reporting system for health care claims data sets for the Commonwealth of Massachusetts. The plan is broken into the following eight sections:

Section 1 **National Claims Data Management System (NCDMS) Overview**
This is a narrative description of the overall claims management system including the software applications and the general staffing involvement.

Section 2 **Routine Data Collection Schedule**
This contains the schedule for the submission of data by carriers with 2,000 or more Massachusetts covered lives (large carriers) and by carriers with 200-1,999 Massachusetts covered lives (smaller carriers). The schedule includes the routine submission of claims and eligibility data.

Section 3 **Data Submission – Data Elements, Completeness Requirements**
This section provides the file lay out specifications for the submission of each data type. It also includes the proposed completeness thresholds for each data element. The completeness thresholds are based upon the data successfully submitted by carriers for Maine and New Hampshire. A sample report is also included.

Section 4 **Data Quality Specifications**
This section provides the detailed specifications for the data quality edits including the exact criteria used to define the numerator and denominator. The threshold levels are based upon the data successfully submitted by carriers for Maine and New Hampshire. A sample data quality report is included.

Section 5 **Confidentiality, Security and Data Encryption**

This section addresses the physical security of the system, the internal processes followed by the MHIC to safeguard the data. The one way data encryption software is also described in Section 5.

Section 6 **Testing**

This section describes the requirements for data testing and the process the carriers can anticipate following during the testing period. Also included is a narrative description of the various data check points within NCDMS.

Section 7 **Unique Member Identification**

This section identifies the data elements that will be used to create a unique member identification number. It describes the process for mining the data and the relationship between the payer submitted data and the unique member identification number.

Section 8 **Provider Data**

This section describes how the provider data will be extracted from the individual claims and used to create a provider table. This approach will facilitate provider reporting in the future.

Statistical Plan

Massachusetts Uniform Reporting System for Health Care Claims Data Sets

NCDMS
National Claims Data Management System

MHIC

National Claims Data Management System (NCDMS) Overview

The external component of the MHIC's claims management system, NCDMS, appears as an SSL-secured web portal that allows carriers to submit properly formatted data files and to monitor the status of those submissions. Using the web portal, the user indicates the type of submission (test, live data, replacement of live data), browses to the file on their local file system, and uploads the compressed (zip) data file. Each uploaded submission is immediately acknowledged by NCDMS and the user is allowed to upload another file, check the status of submissions or log off. The external component assigns a permanent unique file id that is used to track the submission throughout the process. It also records the stage and status of the submission as well as basic information regarding when it was submitted, the type of data, the submitter, the volume of records and the time span covered.

Carriers are responsible for submitting their data through the secure web portal offered through NCDMS or submitting data on a CD or DVD. Data received via DVD will be uploaded by an intake specialist.

The general flow of data through the system and the various check points for data evaluation are described below.

NCDMS OVERVIEW

The National Claims Data Management System (NCDMS) has three main components – external, internal and tracking. The external portion of NCDMS (www.ncdms.org) includes the secure web portal used by the reporter and by Council and MHIC authorized users. There is also a non-secure portion of the NCDMS site with information that is publicly available. The internal NCDMS runs on an internal server and consists of a series of Oracle stored procedures for editing, processing, managing and storing the data. Tracker is the communication component that gathers information from each step in the process for system administration and determines the movement of the data through NCDMS.

WEB PORTAL

The external component appears as a web portal with a secure SSL web upload interface for carriers to submit and monitor data as well as a backend data management tool for tracking the status of each submission. After preparing the submission using the NCDMS encryption application, zipped files are uploaded through the secure web portal created for Massachusetts carriers. Using the web portal, the user (the reporter or the MHIC staff person for submissions received via CD or DVD) indicates the type of submission (test, live data, replacement of live data) and the name of the file being submitted. Each uploaded submission is immediately acknowledged by NCDMS and the user is allowed to upload another file, check the status of submissions or log off.

PRELIM

The external component assigns a permanent unique file id that is used to track the stage and status of the submission as well as basic information regarding when it was submitted, the type of data, the submitter, the volume of records and the time span covered. During this PRELIM phase, the submission is unzipped and standard file level checking on the text file is performed. This includes validating date

ranges, validating the submitter code, comparing the actual record count against the header record, and comparing the records against the file type indicated in the header. PRELIM fails the submission at the first occurrence of any PRELIM error and automatically emails the reporter that failure has occurred, the reason for the failure, the record containing the failure and a request for resubmission. Any file that has not been run through the encryption tool prior to submission will be failed by PRELIM.

LOAD

The internal system has three major phases – LOAD, TRANSFORMS and EDITS. In the LOAD phase the text file is loaded into Oracle and a text based Oracle view of the file is created. This step is necessary to accommodate data that fails to load due to incompatibility with the data type (e.g. alpha data in a numeric field). LOAD verifies the existence of critical data elements at a high level. This high level existence is programmable at the reporter level. For example, a medical claims submission with more than 10% of the records having a blank primary diagnosis code is a LOAD/FAIL condition. All thresholds are evaluated. In the event a submission fails one or more LOAD conditions, Tracker automatically emails the reporter the list of failures and requires a resubmission. Currently there are 9 eligibility, 20 medical and 15 pharmacy LOAD conditions. This list will be reviewed and updated, if necessary, in the Statistical Plan to meet the Council's needs.

FREQUENCY REPORTS

A frequency count is created for every data element to evaluate the percent of records with a null entry, a valid entry and with an invalid entry. The completeness percent, based upon records with a valid entry, is evaluated against the state approved threshold of tolerance for that data element. Any submission with one or more data elements failing the threshold test will be rejected. An email to the reporter containing a brief message indicating failure and a link to the web report for the entire submission will be automatically generated and sent by NCDMS. The statewide threshold is parameter driven and can be changed through NCDMS web pages available to the data managers. In the event that a reporter cannot meet the statewide threshold for one or more data elements, the Council may authorize a lower completeness threshold for a specified period of time. That reporter's data will be evaluated against the lower threshold for the allotted time span. The frequency report will be finalized within the Statistical Plan.

TRANSFORMS

TRANSFORMS populates value-added fields used in data element validation and in the data warehouse tables. The TRANSFORMS phase includes the setting of age, standardized product and relationship coding across data types, and drug categorization. Any standardization of submitted data occurs in a new field. All of the data submitted by the reporter is preserved as submitted unless the reporter and/or the state agency authorize the changing of submitted data.

EDITS

The EDITS module includes data verification checks to evaluate the validity and distribution of the individual data elements and to cross check the appropriateness of values in conjunction with other data contained in the same record. Edits have been designed for each data

set submitted. The edits include cross checking data against national coding systems including, but not limited to, ICD-9 diagnoses, ICD-9 procedures, CPT and HCPC procedures, and NDC codes. EDITS also performs data quality checks to assess the inter-relationship of individual data elements and evaluate rates against parameter driven thresholds. For example, "M" is a valid gender code for males. A submission with 100% of the records coded as "M" will pass LOAD but will fail the data quality check that flags a submission with less than 20% of the records or more than 80% of the records coded as male. A submission passing all data quality threshold checks is marked as DQ/PASS and an email is automatically sent to the reporter indicating the submission is successful. Carriers are notified a submission is at DQ/REVIEW if it has failed one or more data quality thresholds and the data quality report is flagged for manual review.

DQ/REVIEW

DQ/REVIEW submissions are manually reviewed within 3 business days. Hands-on data mining is generally required for problems identified in these submissions. MHIC's intake specialists send a detailed email to the reporter regarding the problem and what research indicates may be causing the problem. The submission status is then set to DQ/FAIL. This initial email is often followed by conference calls to discuss reporter system issues and limitations, rule clarification, or other contributing factors. MHIC's information systems staff is a major participant in researching data problems, discussing options with the reporter and implementing customized system changes. These discussions may require MHIC to make corrections to the submitted data and the reporter to make changes in subsequent submissions or it may require the reporter to resubmit the data.

SUBMISSION STATUS TOOLS

The current status of each submission is maintained in an Oracle table that is viewable to the reporter from the reporter's web portal and from the MHIC's data manager's screens. The reporter may click on the "Report" button to see the detailed results. The frequency and data quality reports are accessible online to the carriers as well. Through NCDMS, Council staff may monitor the submission and editing process for NCDMS in general, as well as for any individual payer. This includes the ability to identify overdue submissions by data type and time period. Council staff will have direct access to all reports available to carriers.

AUXILIARY DATA QUALITY EVALUATION TOOLS

In addition to the processing and verifying of individual submissions, it is necessary to look at a submission in the context of all other submissions for that data period. Through NCDMS, the data manager has a series of software tools available to look at the database in total. These tools are used to identify duplicate submissions, duplicate records, unusual trends in record volume, unusual trends in payments, and data gaps. Because the insurance industry is an active market and there are so many variables to consider, MHIC has found it inappropriate to program automatic responses to many of the data situations uncovered by these reports. It has sometimes been more effective to identify patterns for specific carriers, make program adjustments for these patterns and continue to monitor the situation on a routine basis. These tools are used by the intake specialists. When an unusual problem is identified, the Director of Information Systems becomes involved in its resolution with the carrier.

RESUBMISSIONS

NCDMS also allows for the resubmission of the data and has a specific category of replacement data in the upload menu. A reporter that is replacing accepted data must indicate the type of data and the start and end date for the data before uploading. Data submitted by a reporter for a data type and time period that has already been accepted will be rejected as duplicate data unless the replacement submission procedures are followed. In those unusual situations where a subset of eligibility or claims records were omitted from the original filing, accommodations can be made with the MHIC staff to arrange for a supplemental submission to fill the gap of the missing data.

PRELIM, LOAD, frequency reports, TRANSFORMS, and EDITS are all NCDMS functions that are automatically performed within seconds or hours of the submission, depending upon the file size. DQ/REVIEW is a manual task completed by intake specialists within 3 business days of receipt.

Intake specialists are also responsible for manually flagging replaced submissions for system deletion. This flagging occurs as a data warehouse preparation task.

Large Carrier Routine Data Collection Schedule for Massachusetts Health Care Quality and Cost Council

Date	Event
3/31	February eligibility data February paid claims
4/30	March eligibility data March paid claims
5/31	April eligibility data April paid claims
6/30	May eligibility data May paid claims
7/31	June eligibility data June paid claims
8/31	July eligibility data July paid claims
9/30	August eligibility data August paid claims
10/31	September eligibility data September paid claims
11/30	October eligibility data October paid claims
12/31	November eligibility data November paid claims
1/31	December eligibility data December paid claims
2/28	January eligibility data January paid claims

Large carriers are carriers with 2,000 or more Massachusetts covered lives.

The routine monthly submission of medical and pharmacy eligibility and claims data begins with the submission of February 2008 data by March 31, 2008 and continues as shown above. The first routine submission of dental data by large carriers will begin with the submission of August 2008 data by September 30, 2008 and continue monthly as scheduled above.

Smaller Carrier Routine Data Collection Schedule
For Massachusetts
Health Care Quality and Cost Council

Date	Event
7/31	April - June eligibility data April - June paid claims
10/31	July – September eligibility data July – September paid claims
1/31	October - December eligibility data October – December paid claims
4/30	January – March eligibility data January - March paid claims

Smaller carriers are carriers with 200 – 1,999 covered Massachusetts lives.

The routine quarterly submission of medical and pharmacy eligibility and claims data begins with the submission of second quarter 2008 data by July 31, 2008 and continues as shown above. The first routine submission of dental data by smaller carriers will begin with the submission of July 2008 through September 2008 data by October 31, 2008.

Data Submission: Data Elements, Completeness Requirements and Sample Frequency Report

The following sets of tables indicate the record types for the submission of eligibility, medical claims and pharmacy claims for the Commonwealth of Massachusetts. Each set begins with a single header record and ends with a single trailer record.

The contents of the table columns are as follows:

- **File** – Type of record (header, eligibility, medical claims, pharmacy claims, or trailer)
- **Col** – Place number of the data field within the type of record
- **Element #** – number of the data element as it appear in the regulation. If the element number is greater than 100, it is an element required for NCDMS to create the unique member ID number.
- **Element Name** – name of the data element as it appears in the regulation
- **Threshold** – the % of records in the submission that must have a valid value reported or the submission will fail in the load process. For the purposes of this calculation, a null value is considered an invalid code
- **Denominator** – the types of records that will be used in calculating the % complete for the submission. The possible denominators are:
  - All – all records
  - Facility – all facility records
  - Inpatient – all inpatient records
  - Non-Facility – all records not coded as facility
- **Type** – text, integer, decimal or date as specified in the regulation
- **Len** – maximum number of characters allowed. Please note that, with the approval of Council staff, the length has sometimes been expanded to permit more characters than specified in the regulations
- **Description** – comments regarding the content of this data element
- **Encrypt**? – N = No, the field is not encrypted
  - Y = Yes, the field is encrypted with the web start application
- **Oracle Field Name** – name of the data element in the data warehouse. This name will also appear on the frequency report in the column labeled COLNAME.

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
HD	1	HD001	Record Type	100%	All	Text	2	HD	N	RECTYPE
HD	2	HD002	Payer	100%	All	Text	8	Payer submitting payments; Council Submitter Code	N	PAYER
HD	3	HD003	National Plan Id	0%	All	Text	30	CMS National Plan ID; This is not yet available. Code as null	N	NPLAN
HD	4	HD004	Type of File	100%	All	Text	2	MA	N	FILETYPE
HD	5	HD005	Period Beginning Date	100%	All	Integer	6	CCYYMM	N	BEGPERIOD
HD	6	HD006	Period Ending Date	100%	All	Integer	6	CCYYMM	N	ENDPERIOD
HD	7	HD007	Record Count	100%	All	Integer	10	Total number of records submitted in the file	N	RECCNT
HD	8	HD008	Comments	0%	All	Text	80	Payer comments	N	CMNTS
E	1	ME001	Payer	100%	All	Text	8	Payer submitting payments; Council Submitter Code	N	NAIC
E	2	ME002	National Plan ID	0%	All	Text	30	CMS National Plan ID; This is not yet available. Code as null	N	NPLAN
E	3	ME003	Insurance Type Code/Product	100%	All	Text	2		N	PRODUCT
E	4	ME004	Year	100%	All	Integer	4		N	YEAR
E	5	ME005	Month	100%	All	Integer	2		N	MONTH
E	6	ME006	Insured Group or Policy Number	95%	All	Text	30		N	IGROUP
E	7	ME007	Coverage Level Code	95%	All	Text	3		N	XPLAN
E	8	ME008	Encrypted Subscriber Unique Identification Number	0%	All	Text	30	Subscriber's social security number; used to create unique member ID	Y	ESSN

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
E	9	ME009	Plan Specific Contract Number	0%	All	Text	30	Do not include values in this field that will distinguish one member of the family from another. If submitted, this should be the contract or certificate number for the subscriber and all of his/her dependents	Y	CONTRACT
E	10	ME010	Member Suffix or Sequence Number	90%	All	Integer	2		N	SEQNO
E	11	ME011	Member Identification Code	0%	All	Text	30	Member's social security number; used to create unique member ID	Y	MEMSSN
E	12	ME012	Individual Relationship Code	100%	All	Integer	2		N	REL
E	13	ME013	Member Gender	100%	All	Text	1		N	SEX
E	14	ME014	Member Date of Birth	90%	All	Date	8	CCYYMMDD	N	DOB
E	15	ME015	Member City Name	90%	All	Text	30		N	PATCITY
E	16	ME016	Member State or Province	90%	All	Text	2		N	PATST
E	17	ME017	Member ZIP Code	90%	All	Text	11		N	PATZIP
E	18	ME018	Medical Coverage	100%	All	Text	1		N	MEDICAL
E	19	ME019	Prescription Drug Coverage	100%	All	Text	1		N	RX
E	20	ME020	Race 1	0%	All	Text	6		N	RACE1
E	21	ME021	Race 2	0%	All	Text	6		N	RACE2
E	22	ME022	Other Race	0%	All	Text	15		N	OTHRACE
E	23	ME023	Hispanic Indicator	0%	All	Text	1		N	HISPANIC
E	24	ME024	Ethnicity 1	0%	All	Text	6		N	ETHNICITY1
E	25	ME025	Ethnicity 2	0%	All	Text	6		N	ETHNICITY2
E	26	ME026	Other Ethnicity	0%	All	Text	20		N	OTHETHNICITY

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
E	27	ME901	Encrypted Subscriber Last Name	100%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	ESUBLNAME
E	28	ME902	Encrypted Subscriber First Name	90%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	ESUBFNAME
E	29	ME903	Encrypted Subscriber Middle Initial	10%	All	Text	1	Used to create unique member ID	Y	ESUBMI
E	30	ME904	Encrypted Member Last Name	100%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	EMEMLNAME
E	31	ME905	Encrypted Member First Name	90%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be	Y	EMEMFNAME

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
								reported all in upper case		
E	32	ME906	Encrypted Member Middle Initial	10%	All	Text	1	Used to create unique member ID	Y	EMEMMI
E	33	ME027	Record Type	100%	All	Text	2	Value MA	N	RECTYPE
TR	1	TR001	Record Type	100%	All	Text	2	Value TR	N	RECTYPE
TR	2	TR002	Payer	100%	All	Text	8	Payer Code	N	PAYER
TR	3	TR003	National Plan ID	0%	All	Text	30	CMS National Plan ID; This is not yet available. Code as null	N	NPLAN
TR	4	TR004	Type of File	100%	All	Text	2	MA	N	FILETYPE
TR	5	TR005	Period Beginning Date	100%	All	Integer	6	YYYYMM	N	BEGPERIOD
TR	6	TR006	Period Ending Date	100%	All	Integer	6	YYYYMM	N	ENDPERIOD
TR	7	TR007	Date Processed	0%	All	Date	8	CCYYMMDD; Date file was created	N	PROCDATE

Data Submission: Data Elements, Completeness Requirements and Sample Frequency Report

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
HD	1	HD001	Record Type	100%	All	Text	2	HD	N	RECTYPE
HD	2	HD002	Payer	100%	All	Text	8	Payer submitting payments; Council Submitter Code	N	PAYER
HD	3	HD003	National Plan Id	0%	All	Text	30	CMS National Plan ID; This is not yet available. Code as null	N	NPLAN
HD	4	HD004	Type of File	100%	All	Text	2	MC	N	FILETYPE
HD	5	HD005	Period Beginning Date	100%	All	Integer	6	CCYYMM	N	BEGPERIOD
HD	6	HD006	Period Ending Date	100%	All	Integer	6	CCYYMM	N	ENDPERIOD
HD	7	HD007	Record Count	100%	All	Integer	10	Total number of records submitted in the file	N	RECCNT
HD	8	HD008	Comments	0%	All	Text	80	Payer comments	N	CMNTS
M	1	MC001	Payer	100%	All	Text	8	Payer submitting payments; Council Submitter Code	N	NAIC
M	2	MC002	National Plan ID	0%	All	Text	30	CMS National Plan ID; This is not yet available. Code as null	N	NPLAN
M	3	MC003	Insurance Type/Product Code	100%	All	Text	2		N	PRODUCT
M	4	MC004	Payer Claim Control Number	100%	All	Text	35		N	CLAIM
M	5	MC005	Line Counter	70%	All	Integer	4		N	LINE
M	6	MC005A	Version Number	10%	All	Integer	4		N	VERSION
M	7	MC006	Insured Group or Policy Number	95%	All	Text	30		N	IGROUP

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
M	8	MC007	Encrypted Subscriber Unique Identification Number	0%	All	Text	30	Subscriber's social security number; used to create unique member ID	Y	ESSN
M	9	MC008	Plan Specific Contract Number	0%	All	Text	30	Do not include values in this field that will distinguish one member of the family from another. If submitted, this should be the contract or certificate number for the subscriber and all of his/her dependents	Y	CONTRACT
M	10	MC009	Member Suffix or Sequence Number	90%	All	Integer	2		N	SEQNO
M	11	MC010	Member Identification Code	0%	All	Text	30	Member's social security number; used to create unique member ID	Y	MEMSSN
M	12	MC011	Individual Relationship Code	100%	All	Integer	2		N	REL
M	13	MC012	Member Gender	100%	All	Text	1		N	SEX
M	14	MC013	Member Date of Birth	90%	All	Date	8	CCYYMMDD	N	DOB
M	15	MC014	Member City Name	90%	All	Text	30		N	PATCITY
M	16	MC015	Member State or Province	90%	All	Text	2		N	PATST
M	17	MC016	Member ZIP Code	90%	All	Text	11		N	PATZIP
M	18	MC017	Date Service Approved (AP Date)	100%	All	Date	8	CCYYMMDD	N	PDATE
M	19	MC018	Admission Date	90%	Inpatient	Date	8	CCYYMMDD	N	ADMDAT

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
M	20	MC019	Admission Hour	50%	Inpatient	Integer	4	HHMM: If only the hour is known, code the minutes as 00. 4 PM would be reported as 1600	N	ADMHR
M	21	MC020	Admission Type	60%	Inpatient	Integer	1		N	ADMTYPE
M	22	MC021	Admission Source	60%	Inpatient	Text	1		N	ADMSR
M	23	MC022	Discharge Hour	50%	Inpatient and Discharged	Integer	4	HHMM: If only the hour is known, code the minutes as 00. 4 PM would be reported as 1600	N	DISHR
M	24	MC022A	Discharge Date	90%	Inpatient and Discharged	Date	8	CCYYMMDD	N	DISDAT
M	25	MC023	Discharge Status	80%	Inpatient	Integer	2		N	PTDIS
M	26	MC024	Service Provider Number	90%	All	Text	30		N	PRV
M	27	MC025	Service Provider Tax ID Number	90%	All	Text	10		N	PRVTAXID
M	28	MC026	National Service Provider ID	0%	All	Text	20		N	NPRV
M	29	MC027	Service Provider Entity Type Qualifier	90%	All	Text	1		N	PRVTYPE
M	30	MC028	Service Provider First Name	50%	All	Text	25		N	PRVFNAME
M	31	MC029	Service Provider Middle Name	20%	All	Text	25		N	PRVMNAME
M	32	MC030	Service Provider Last Name or Organization Name	90%	All	Text	50		N	PRVLNAME
M	33	MC031	Service Provider Suffix	10%	All	Text	10		N	PRVSUFFIX

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
M	34	MC032	Service Provider Specialty	95%	All	Text	50		N	PRVSPEC
M	35	MC033	Service Provider City Name	90%	All	Text	30		N	PRVCITY
M	36	MC034	Service Provider State	90%	All	Text	2		N	PRVST
M	37	MC035	Service Provider ZIP Code	90%	All	Text	11		N	PRVZIP
M	38	MC035A	Service Provider Country Name	90%	All	Text	30	Code US for United States	N	PRVCNTRY
M	39	MC036	Type of Bill - on Facility Claims	40%	Facility	Integer	2		N	BILLTYPE
M	40	MC037	Site of Service - on NSF/CMS 1500 Claims	70%	Non-Facility	Text	2	May be reported on facility claims but not required	N	FACTYPE
M	41	MC038	Claim Status	90%	All	Integer	2		N	STATUS
M	42	MC039	Admitting Diagnosis	60%	All	Text	5		N	ADMDX
M	43	MC040	E-Code	5%	All	Text	5		N	ECODE
M	44	MC041	Principal Diagnosis	90%	All	Text	5		N	DX1
M	45	MC042	Other Diagnosis - 1	60%	All	Text	5		N	DX2
M	46	MC043	Other Diagnosis - 2	40%	All	Text	5		N	DX3
M	47	MC044	Other Diagnosis - 3	20%	All	Text	5		N	DX4
M	48	MC045	Other Diagnosis - 4	10%	All	Text	5		N	DX5
M	49	MC046	Other Diagnosis - 5	0%	All	Text	5		N	DX6
M	50	MC047	Other Diagnosis - 6	0%	All	Text	5		N	DX7
M	51	MC048	Other Diagnosis - 7	0%	All	Text	5		N	DX8
M	52	MC049	Other Diagnosis - 8	0%	All	Text	5		N	DX9
M	53	MC050	Other Diagnosis - 9	0%	All	Text	5		N	DX10
M	54	MC051	Other Diagnosis - 10	0%	All	Text	5		N	DX11
M	55	MC052	Other Diagnosis - 11	0%	All	Text	5		N	DX12
M	56	MC053	Other Diagnosis - 12	0%	All	Text	5		N	DX13
M	57	MC054	Revenue Code	40%	All	Text	4		N	REV

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
M	58	MC055	Procedure 1 Code	60%	All	Text	5		N	CPT
M	59	MC056	Procedure 1 Modifier - 1	10%	All	Text	2		N	MOD1
M	60	MC057	Procedure 1 Modifier - 2	2%	All	Text	2		N	MOD2
M	61	MC058	ICD9-CM Procedure 1 Code	10%	All	Text	4		N	OP
M	62	MC059	Date of Service - From	95%	All	Date	8	CCYYMMDD	N	FDATE
M	63	MC060	Date of Service - Thru	95%	All	Date	8	CCYYMMDD	N	LDATE
M	64	MC061	Quantity	85	All	Integer	3		N	QTY
M	65	MC062	Charge Amount	95%	All	Decimal	10	Decimal points are implied	N	CHG
M	66	MC063	Paid Amount	0%	All	Decimal	10	Decimal points are implied	N	TPAY
M	67	MC064	Prepaid Amount	0%	All	Decimal	10	Decimal points are implied	N	PREPAID
M	68	MC065	Copay Amount	0%	All	Decimal	10	Decimal points are implied	N	COPAY
M	69	MC066	Coinsurance Amount	0%	All	Decimal	10	Decimal points are implied	N	COINS
M	70	MC067	Deductible Amount	0%	All	Decimal	10	Decimal points are implied	N	DED
M	71	MC901	Encrypted Subscriber Last Name	100%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	ESUBLNAME

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
M	72	MC902	Encrypted Subscriber First Name	90%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	ESUBFNAME
M	72	MC903	Encrypted Subscriber Middle Initial	10%	All	Text	1	Used to create unique member ID	Y	ESUBMI
M	74	MC904	Encrypted Member Last Name	100%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	EMEMLNAME
M	75	MC905	Encrypted Member First Name	90%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	EMEMFNAME
M	76	MC906	Encrypted Member Middle Initial	10%	All	Text	1	Used to create unique member ID	Y	EMEMMI
M	77	MC068	Record Type	100%	All	Text	2	Value MC	N	RECTYPE
TR	1	TR001	Record Type	100%	All	Text	2	Value TR	N	RECTYPE
TR	2	TR002	Payer	100%	All	Text	8	Payer Code	N	PAYER

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt?	Oracle Field Name
TR	3	TR003	National Plan ID	0%	All	Text	30	CMS National Plan ID; This is not yet available. Code as null	N	NPLAN
TR	4	TR004	Type of File	100%	All	Text	2	MC	N	FILETYPE
TR	5	TR005	Period Beginning Date	100%	All	Integer	6	YYYYMM	N	BEGPERIOD
TR	6	TR006	Period Ending Date	100%	All	Integer	6	YYYYMM	N	ENDPERIOD
TR	7	TR007	Date Processed	0%	All	Date	8	CCYYMMDD; Date file was created	N	PROCDATE
			Denominator Definitions **Inpatient** - Count of all records for a claim where at least one claim line contains a type of bill (MC036) = 11, 12, 41, 42, 51, 52) or a revenue code (MC054) between 110 and 239 **Inpatient and Discharged** - Count of all records for a claim where at least one claim line contains (a type of bill (MC036) = 11, 12, 41, 42, 51, 52) or a revenue code (MC054) between 110 and 239) and a discharge status (MC023) not between 30 and 39 **Facility** - Count of all records for a claim where at least one claim line contains a valid type of bill (MC036) or a valid revenue code (MC054) **Non-Facility** - Count of all records for a claim where there are no valid entries for type of bill (MC036) or revenue code (MC054) In those instances where the denominator is a subset of the submission, the numerator will be evaluated only on the values reported in the subset.						

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt ?	Oracle Field Name
HD	1	HD001	Record Type	10%	All	Text	2	HD	N	RECTYPE
HD	2	HD002	Payer	10%	All	Text	8	Payer submitting payments; Council Submitter Code	N	PAYER
HD	3	HD003	National Plan Id	0%	All	Text	30	CMS National Plan ID; This is not yet available. Code as null	N	NPLAN
HD	4	HD004	Type of File	10%	All	Text	2	PC	N	FILETYPE
HD	5	HD005	Period Beginning Date	10%	All	Integer	6	CCYYMM	N	BEGPERIOD
HD	6	HD006	Period Ending Date	10%	All	Integer	6	CCYYMM	N	ENDPERIOD
HD	7	HD007	Record Count	10%	All	Integer	10	Total number of records submitted in the file	N	RECCNT
HD	8	HD008	Comments	0%	All	Text	80	Payer comments	N	CMNTS
P	1	PC001	Payer	10%	All	Text	8		N	NAIC
P	2	PC002	Plan ID	0%	All	Text	30	CMS National Plan ID; This is not yet available. Code as null	N	NPLAN
P	3	PC003	Insurance Type/Product Code	10%	All	Text	2		N	PRODUCT
P	4	PC004	Payer Claim Control Number	10%	All	Text	35		N	CLAIM
P	5	PC005	Line Counter	70%	All	Integer	4		N	LINE
P	6	PC006	Insured Group Number	95%	All	Text	30		N	IGROUP
P	7	PC007	Encrypted Subscriber Unique Identification Number	0%	All	Text	30	Subscriber's social security number; used to create unique	Y	ESSN

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt ?	Oracle Field Name
								member ID		
P	8	PC008	Plan Specific Contract Number	0%	All	Text	30	Do not include values in this field that will distinguish one member of the family from another. If submitted, this should be the contract or certificate number for the subscriber and all of his/her dependents	Y	CONTRACT
P	9	PC009	Member Suffix or Sequence Number	90%	All	Integer	2		N	SEQNO
P	10	PC010	Member Identification Code	0%	All	Text	30	Member's social security number; used to create unique member ID	Y	MEMSSN
P	11	PC011	Individual Relationship Code	100%	All	Integer	2		N	REL
P	12	PC012	Member Gender	100%	All	Integer	1		N	SEX
P	13	PC013	Member Date of Birth	90%	All	Date	8	CCYYMMDD	N	DOB
P	14	PC014	Member City Name of Residence	90%	All	Text	30		N	PATCITY
P	15	PC015	Member State	90%	All	Text	2		N	PATST
P	16	PC016	Member ZIP Code	90%	All	Text	9		N	PATZIP
P	17	PC017	Date Service Approved (AP Date)	100%	All	Date	8	CCYYMMDD	N	PDATE
P	18	PC018	Pharmacy Number	90%	All	Text	30		N	PHARM
P	19	PC019	Phamacy Tax ID Number	10%	All	Text	10		N	PHARMTAX

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt ?	Oracle Field Name
P	20	PC020	Pharmacy Name	90%	All	Text	30		N	PHARMNM
P	21	PC021	National Pharmacy ID Number	0%	All	Text	20		N	NPHARM
P	22	PC022	Pharmacy Location City	70%	All	Text	30		N	PHARMCITY
P	23	PC023	Pharmacy Location State	90%	All	Text	2		N	PHARMST
P	24	PC024	Pharmacy ZIP Code	90%	All	Text	10		N	PHARMZIP
P	25	PC024A	Pharmacy Country Name	90%	All	Text	30	Code US for United States	N	PHARMCNTRY
P	26	PC025	Claim Status	90%	All	Integer	2		N	STATUS
P	27	PC026	Drug Code	90%	All	Text	11		N	NDC
P	28	PC027	Drug Name	90%	All	Text	80		N	DRUGNM
P	29	PC028	New Prescription	70%	All	Text	1		N	NEWPR
P	30	PC028A	Refill Number	50%	All	Integer	2		N	REFILL
P	31	PC029	Generic Drug Indicator	90%	All	Text	1		N	GENRX
P	32	PC030	Dispense as Written Code	50%	All	Integer	1		N	DAW
P	33	PC031	Compound Drug Indicator	90%	All	Text	1		N	COMPOUND
P	34	PC032	Date Prescription Filled	95%	All	Text	8	CCYYMMDD	N	FDATE
P	35	PC033	Quantity Dispensed	85	All	Integer	5		N	QTY
P	36	PC034	Days Supply	90%	All	Integer	3		N	DAYS
P	37	PC035	Charge Amount	95%	All	Decimal	10	Decimal points are implied	N	CHG
P	38	PC036	Paid Amount	0%	All	Decimal	10	Decimal points are implied	N	TPAY
P	39	PC037	Ingredient Cost/List Price	0%	All	Decimal	10	Decimal points are implied	N	INGRED
P	40	PC038	Postage Amount Claimed	0%	All	Decimal	10	Decimal points are implied	N	POSTAGE

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt ?	Oracle Field Name
P	41	PC039	Dispensing Fee	0%	All	Decimal	10	Decimal points are implied	N	DISPFEE
P	42	PC040	Copay Amount	0%	All	Decimal	10	Decimal points are implied	N	COPAY
P	43	PC041	Coinsurance Amount	0%	All	Decimal	10	Decimal points are implied	N	COINS
P	44	PC042	Deductible Amount	0%	All	Decimal	10	Decimal points are implied	N	DED
P	45	PC901	Encrypted Subscriber Last Name	100%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	ESUBLNAME
P	46	PC902	Encrypted Subscriber First Name	90%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	ESUBFNAME
P	47	PC903	Encrypted Subscriber Middle Initial	10%	All	Text	1	Used to create unique member ID	Y	ESUBMI
P	48	PC904	Encrypted Member Last Name	100%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be	Y	EMEMLNAME

File	Col	Element #	Element Name	Threshold	Denom-inator	Type	Len	Description	Encrypt ?	Oracle Field Name
								reported all in upper case		
P	49	PC905	Encrypted Member First Name	90%	All	Text	30	Used to create unique member ID. Name should exclude all punctuation including hyphens and apostrophes and be reported all in upper case	Y	EMEMFNAME
P	50	PC906	Encrypted Member Middle Initial	10%	All	Text	1	Used to create unique member ID	Y	EMEMMI
P	51	PC043	Record Type	10%	All	Text	2	Value PC	N	RECTYPE
TR	1	TR001	Record Type	10%	All	Text	2	Value TR	N	RECTYPE
TR	2	TR002	Payer	10%	All	Text	8	Payer Code	N	PAYER
TR	3	TR003	National Plan ID	0%	All	Text	30	CMS National Plan ID; This is not yet available. Code as null	N	NPLAN
TR	4	TR004	Type of File	10%	All	Text	2	PC	N	FILETYPE
TR	5	TR005	Period Beginning Date	10%	All	Integer	6	YYYYMM	N	BEGPERIOD
TR	6	TR006	Period Ending Date	10%	All	Integer	6	YYYYMM	N	ENDPERIOD
TR	7	TR007	Date Processed	0%	All	Date	8	CCYYMMDD; Date file was created	N	PROCDATE

Data Submission: Data Elements, Completeness Requirements and Sample Frequency Report

The sample frequency report is an example of the report generated at load time for each submission. The report is available on the carrier's secure web page. The contents of the report columns are as follows:

- **FILEID** – system wide unique number assigned by NCDMS for the submission
- **MTIME** – month and year of data submitted.
- **ELEMENT** - number of the data element as it appear in the regulation. If the element number is greater than 100, it is an element required for NCDMS to create the unique member ID number.
- **COLNAME** – name of the data element in the data warehouse. This corresponds to the column labeled Oracle Field Name in the preceding file submission tables.
- **VALID** – count of records submitted with a valid non-null, code value
- **INVALID** – count of records submitted with an invalid, non-null code value
- **NULLCOUNT** – count of records submitted with a null value. The contents of a text field submitted with all blanks will be transformed into a null value.
- **THRESH** – the minimum % complete for this field system wide. Thresholds are based upon the minimum % complete rates supported by carriers submitting Maine and NH claims data.
- **PAYERTHRESH** – the minimum % complete for this field adjusted for this payer
- **PRC** – the % of complete records for this field in the submission. The numerator for this field is the number of records in the valid column.
- **RESULT** – the result of comparing the value in PRC to the value in THRESH (or PAYERTHRESH if a value is given)
  FAIL – % completeness for submission (PRC) is less than minimum authorized completeness threshold (THRESH or PAYERTHRESH)
  PASS – % completeness for submission (PRC) is greater than or equal to minimum system wide completeness threshold (THRESH)
  PASS/E – % completeness for submission is greater than or equal to minimum for carrier specific completeness threshold (PAYERTHRESH)

Sample Frequency Report

FILEID	MTIME	ELEMENT	COLNAME	VALID	INVALID	NULLCOUNT	THRESH	PAYERTHRESH	PRC	RESULT
99999	200709	MC068	RECTYPE	861224	0	0	100%		100	PASS
99999	200709	MC067	DED	861224	0	0	0%		100	PASS
99999	200709	MC066	COINS	861224	0	0	0%		100	PASS
99999	200709	MC065	COPAY	861224	0	0	0%		100	PASS
99999	200709	MC064	PREPAID	861224	0	0	0%		100	PASS
99999	200709	MC063	TPAY	861224	0	0	0%		100	PASS
99999	200709	MC062	CHG	861224	0	0	95%		100	PASS
99999	200709	MC061	QTY	861224	0	0	85%		100	PASS
99999	200709	MC060	LDATE	860330	0	894	95%		99.9	PASS
99999	200709	MC059	FDATE	861224	0	0	95%		100	PASS
99999	200709	MC058	OP	42155	429	818640	10%	0%	4.89	PASS/E
99999	200709	MC057	MOD2	0	0	861224	2%	0%	0	PASS/E
99999	200709	MC056	MOD1	147495	650117	63612	10%	5%	17.13	PASS
99999	200709	MC055	CPT	787416	1428	72380	60%		91.43	PASS
99999	200709	MC054	REV	295336	0	565888	40%	30%	34.29	PASS/E
99999	200709	MC053	DX13	0	0	861224	0%		0	PASS
99999	200709	MC052	DX12	0	0	861224	0%		0	PASS
99999	200709	MC051	DX11	0	0	861224	0%		0	PASS

Data Submission: Data Elements, Completeness Requirements and Sample Frequency Report

FILEID	MTIME	ELEMENT	COLNAME	VALID	INVALID	NULLCOUNT	THRESH	PAYERTHRESH	PRC	RESULT
99999	200709	MC050	DX10	20475	0	840749	0%		2.38	PASS
99999	200709	MC049	DX9	29266	0	831958	0%		3.4	PASS
99999	200709	MC048	DX8	37915	0	823309	0%		4.4	PASS
99999	200709	MC047	DX7	49931	0	811293	0%		5.8	PASS
99999	200709	MC046	DX6	67830	0	793394	0%		7.88	PASS
99999	200709	MC045	DX5	184857	22	676345	10%		21.46	PASS
99999	200709	MC044	DX4	285803	0	575421	20%		33.19	PASS
99999	200709	MC043	DX3	463987	52	397185	40%		53.88	PASS
99999	200709	MC042	DX2	820425	40	40759	60%		95.26	PASS
99999	200709	MC041	DX1	843085	17650	489	90%		97.89	PASS
99999	200709	MC040	ECODE	25820	0	835404	5%	0%	3	PASS/E
99999	200709	MC038	STATUS	861224	0	0	90%		100	PASS
99999	200709	MC037	FACTYPE	565899	0	295325	70%	60%	65.71	PASS/E
99999	200709	MC036	BILLTYPE	291350	3975	565899	40%	20%	33.83	PASS/E
99999	200709	MC035	PRVZIP	825694	15621	19909	90%		95.87	PASS
99999	200709	MC034	PRVST	841369	0	19855	90%		97.69	PASS
99999	200709	MC033	PRVCITY	841400	0	19824	90%		97.7	PASS
99999	200709	MC032	PRVSPEC	861090	134	0	95%		99.98	PASS
99999	200709	MC031	PRVSUFFIX	346083	0	515141	10%		40.19	PASS
99999	200709	MC030	PRVLNAME	861224	0	0	90%		100	PASS

Data Submission: Data Elements, Completeness Requirements and Sample Frequency Report

FILEID	MTIME	ELEMENT	COLNAME	VALID	INVALID	NULLCOUNT	THRESH	PAYERTHRESH	PRC	RESULT
99999	200709	MC029	PRVMNAME	28617	0	832607	20%	0%	3.32	PASS/E
99999	200709	MC028	PRVFNAME	348829	0	512395	50%	30%	40.5	PASS/E
99999	200709	MC027	PRVTYPE	827430	0	33794	90%		96.08	PASS
99999	200709	MC026	NPRV	0	0	861224	0%		0	PASS
99999	200709	MC025	PRVTAXID	861224	0	0	90%		100	PASS
99999	200709	MC024	PRV	861224	0	0	90%		100	PASS
99999	200709	MC017	PDATE	861224	0	0	100%		100	PASS
99999	200709	MC016	PATZIP	861068	156	0	90%		99.98	PASS
99999	200709	MC015	PATST	861224	0	0	90%		100	PASS
99999	200709	MC014	PATCITY	861224	0	0	90%		100	PASS
99999	200709	MC013	DOB	861180	0	44	90%		99.99	PASS
99999	200709	MC012	SEX	861224	0	0	100%		100	PASS
99999	200709	MC011	REL	861224	0	0	100%		100	PASS
99999	200709	MC010	MEMSSN	861224	0	0	0%		100	PASS
99999	200709	MC009	SEQNO	861073	0	151	90%		99.98	PASS
99999	200709	MC008	CONTRACT	861224	0	0	0%		100	PASS
99999	200709	MC007	ESSN	861224	0	0	0%		100	PASS
99999	200709	MC006	IGROUP	861224	0	0	95%		100	PASS
99999	200709	MC005	LINE	861224	0	0	70%		100	PASS
99999	200709	MC004	CLAIM	861224	0	0	100%		100	PASS

Data Submission: Data Elements, Completeness Requirements and Sample Frequency Report

FILEID	MTIME	ELEMENT	COLNAME	VALID	INVALID	NULLCOUNT	THRESH	PAYERTHRESH	PRC	RESULT
99999	200709	MC003	PRODUCT	861224	0	0	100%		100	PASS
99999	200709	MC002	NPLAN	0	0	861224	0%		0	PASS
99999	200709	MC001	NAIC	861224	0	0	100%		100	PASS
99999	200709	MC069	PATACCT	845684	0	15540	0%		2049.8	PASS
99999	200709	MC070	DISDAT	39715	0	821509	90%		96.26	PASS
99999	200709	MC039	ADMDX	41182	51	819991	60%		99.82	PASS
99999	200709	MC023	PTDIS	39581	1652	819991	80%		95.94	PASS
99999	200709	MC022	DISHR	40227	0	820997	50%		97.5	PASS
99999	200709	MC021	ADMSR	41233	0	819991	60%		99.94	PASS
99999	200709	MC020	ADMTYPE	41233	0	819991	60%		99.94	PASS
99999	200709	MC019	ADMHR	40227	0	820997	50%		97.5	PASS
99999	200709	MC018	ADMDAT	41233	0	819991	90%		99.94	PASS

Data Quality Specifications

The following table contains the specifications for the data quality edits. The table is sorted by type of submission (File = **E**ligibility, **M**edical, **P**harmacy) and data quality ID number (IDN). A description of the contents of each column follows:

- **IDN** – identification number of edit. If an edit is used for multiple file types, the same edit number is used. This corresponds to the column labeled DQ ID result in the sample data quality report.
- **DESCRIPTION** – brief English-like description of the edit. This corresponds to the column labeled Description in the sample data quality report
- **File** – type of submission for which edit is used
  E = Eligibility
  M = Medical
  P = Pharmacy
- **Fail If** – threshold for failing the submission based upon the number of records meeting the criteria. For example, an eligibility submission will fail automatically if more than 10% of the records have a membership state (ME017) not equal to MA for Massachusetts. The calculation of the threshold is defined in the numerator and denominator columns. Not all edits evaluation points. Some are informational and simply report the total number of records for a specific category to provide perspective on the submission and the volume of potential records that could fail. The informational rows will have a value of N/A in this table column.
- **Numerator** – count of records that meet the criteria.
- **Denominator** – count of possible records that meet the criteria. There are several denominators used in the data quality checks. The specifications for each denominator are included in the table.

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
1	Total # records	E	N/A	Count of records	
2	Total # records - Medicare products	E	N/A	Count of records with product (ME003) = 12,13,14,15,16,41,42,43,47,CP,HS,MA,MB,MP,QM,SP	
3	% Records w/no indication of medical or prescription drug coverage	E	> 3%	Count of records with medical coverage (ME018) <> Y and prescription drug coverage (ME019) <> Y	Count of all records
4	Total # records with age 65+ and no Medicare	E	N/A	Count of records with age > 64 and product (ME003) <> 12,13,14,15,16,41,42,43,47,CP,HS,MA,MB,MP,QM,SP	
5	Total # records with 65+	E	N/A	Count of records with age > 64	
6	% Records w/ invalid eligibility year and/or month	E	>1%	Count of records with Year (ME004) invalid value or Year (ME004) < 2006 or Year (ME004) > processing year or Month (ME005) not between 01 and 12	Count of all records
8	% Records w/invalid medical coverage code	E	> 0%	Count of records with medical coverage (ME018) code invalid	Count of all records
9	% Records w/invalid prescription coverage code	E	> 0%	Count of records with pharmacy coverage (ME019) code invalid	Count of all records
10	Average # members per contract	E	> 3%	Count of distinct members with contract (ME009) not null	Count of distinct contract values (ME009)
11	Average # members per encrypted subscriber SSN	E	> 3%	Count of distinct members with encrypted subscriber social security number (ME008) not null	Count of distinct encrypted subscriber social security number values (ME008)

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
19	% Records w/no contract and no ESSN	E	> 0%	Count of records with encrypted contract number (ME009) null and encrypted subscriber social security number (ME008) null	Count of all records
21	Ratio of MEMSSN to ESSN	E	> 3%	Count of unique encrypted member social security numbers (ME011)	Count of unique encrypted subscriber social security numbers (ME008)
22	% Unique members	E	< 97%	Count of unique combination of encrypted subscriber social security number (ME008) and encrypted contract number (ME009) and date of birth (ME014) and medical coverage (ME018) and prescription drug coverage (ME019)	Count of all records
23	% Records w/gender = male	E	not between 20% and 80%	Count of records with gender (ME013) = M	Count of all records
24	% Records w/unknown gender	E	>0%	Count of records with a gender (ME013) code = 'U' or null value	Count of all records
25	% Records w/relationship = subscriber	E	not between 20% and 80%	Count of records with relationship (ME012) = 18	Count of all records
26	Average age of dependent	E	not between 6 and 18	Sum of age for relationship (ME012) = 19	Count of records with relationship (ME012) = 19
27	Average age of member	E	> 60	Sum of age	Count of all records
28	% Records invalid coverage or plan type	E	>1%	Count of records with coverage level code (ME007) invalid	Count of all records

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
29	% Records single contracts	E	> 95%	Count of records with coverage level code (ME007) = EMP	Count of all records
30	% Records patient city missing	E	> 5%	Count of records with patient city (ME015) null	Count of all records
33	% Records unknown patient zip codes	E	>10%	Count of records with patient zip code (ME017) invalid	Count of records with patient zip code (ME017) not null
34	% Records w/o patient zip code	E	> 3%	Count of records with patient zip code (ME017) null	Count of all records
35	% Records w/o patient state	E	> 5%	Count of records with patient state (ME016) null	Count of all records
36	% Records w/blank or invalid product	E	> 3%	Count of records with product code (ME003) invalid or null	Count of all records
37	% Records w/group number blank	E	> 0.1%	Count of records with group number (ME006) null	Count of all records
38	% Records with age 65+ and not Medicare product	E	> 10%	Count of records with age > 64 and product (ME003) <> 12,13,14,15,16,41,42,43,47,CP,HS,MA,MB,MP,QM,SP	Count of all records
40	% Records w/unknown relationship code	E	>3%	Count of records with relationship (ME012) code = 21 or invalid	Count of all records
102	% Members under 65 with Medicare	E	> 10%	Count of unique combination of encrypted subscriber social security number (ME008) and encrypted contract number (ME009) and date of birth (ME014) and medical coverage (ME018) and prescription drug coverage (ME019) with age < 65 and product (ME003) = 12,13,14,15,16,41,42,43,47,CP,HS,MA,MB,MP,QM,SP	Count of unique combination of encrypted subscriber social security number (ME008) and encrypted contract number (ME009) and date of birth (ME014) and medical coverage (ME018) and prescription drug coverage (ME019)

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
114	% Unique members	E	< 97%	Count of unique combination of encrypted subscriber social security number (ME008) and encrypted contract number (ME009) and date of birth (ME014) and medical coverage (ME018) and prescription drug coverage (ME019)	Count of all records
117	# Members with medical coverage	E	N/A	Count of records with medical coverage (ME018) = Y	Count of all records
118	# Members with prescription drug coverage	E	N/A	Count of records with pharmacy coverage (ME019) = Y	Count of all records
132	% Records non Massachusetts member state	E	> 10%	Count of records with patient state (ME016) <> MA	Count of all records
133	% Records non Massachusetts member zip code	E	> 10%	Count of records with first five characters of patient zip code (ME017) not between 01001 and 02791 and <> 05501, 05544	Count of records with valid patient zip code (ME017)
140	% Records with member zip code not within member state	E	> 3%	Count of records with first five characters of patient zip code (ME017) not valid code within patient state (ME016)	Count of records with valid patient zip code (ME017) and valid patient state code (ME016)
142	% Records with race 1 coded as unknown	E	TBD	Count of records with race 1 (ME020) = UNKNOW	Count of records with race 1 (ME020) not null
143	% Records with race 2 coded as unknown	E	TBD	Count of records with race 2 (ME021) = UNKNOW	Count of records with race 2 (ME021) not null
144	% Records with race 1 coded as other w/o label	E	TBD	Count of records with race 1 (ME020) = R9 and other race (ME022) is null	Count of records with race 1 (ME020) = R9
145	% Records with race 2 coded as other w/o label	E	TBD	Count of records with race 2 (ME021) = R9 and other race (ME022) is null	Count of records with race 1 (ME021) = R9

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
146	% Records with race 1 or race 2 non-white	E	TBD	Count of records with race 1 (ME020) = R1, R2, R3, R4, R9 or race 2 (ME021) = R1, R2, R3, R4, R5, R9	Count of records with valid race 1 (ME020) code
147	% Records with Hispanic indicator unknown	E	TBD	Count of records with Hispanic indicator (ME023) = U	Count of records with valid Hispanic indicator (ME023) code
148	% Records with ethnicity 1 coded as unknown	E	TBD	Count of records with ethnicity 1 (ME023) = UNKNOW	Count of records with ethnicity 1 (ME023) not null
149	% Records with ethnicity 2 coded as unknown	E	TBD	Count of records with ethnicity 2 (ME024) = UNKNOW	Count of records with ethnicity 2 (ME024) not null
150	% Records with ethnicity 1 coded as other w/o label	E	TBD	Count of records with ethnicity 1 (ME023) = OTHER and other ethnicity (ME025) is null	Count of records with ethnicity 1 (ME023) = OTHER
151	% Records with ethnicity 2 coded as other w/o label	E	TBD	Count of records with ethnicity 2 (ME024) = OTHER and other ethnicity (ME025) is null	Count of records with ethnicity 1 (ME024) = OTHER
152	% Records with ethnicity 1 or ethnicity 2 non-American	E	TBD	Count of records with ethnicity 1 (ME023) with valid code and <> AMERCN or ethnicity 2 (ME024) with valid code and <> AMERCN	Count of records with valid ethnicity 1 (ME023) code
162	Average # members Per Contract	E	> 3	Count of unique combination of encrypted contract number (ME009) and date of birth (ME014) and medical coverage (ME018) and prescription drug coverage (ME019)	Count of unique encrypted contract numbers (ME009)
163	Average # members Per ESSN	E	> 3	Count of unique combination of encrypted subscriber social security number (ME008) and date of birth (ME014) and medical coverage (ME018) and prescription drug coverage (ME019)	Count of unique encrypted subscriber social security numbers (ME010)
1	Total # records	M	N/A	Count of records	

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
2	Total # records - Medicare products	M	N/A	Count of records with product (MC003) = MA, MB	
4	Total # records with age 65+ and no Medicare	M	N/A	Count of records with age > 64 and product (MC003) <> MA, MB	
5	Total # records with 65+	M	N/A	Count of records with age > 64	
7	Total # records w/age 65+ and paid as secondary	M	N/A	Count of records with age > 64 and claim status (MC038) = 02, 03, 20, 21	
12	Total # records - generic dependent code	M	N/A	Count of records with relationship (MC011) = 76	
13	Total # records - paid as secondary	M	N/A	Count of records with claim status (MC038) = 02, 03, 20, 21	
16	Average # lines per claim	M	> 10	Distinct count of claim values (MC004)	Count of all records
17	Average # claims per member	M	> 15	Count of unique combination of encrypted subscriber social security number (MC007) and encrypted contract number (MC008) and date of birth (MC013)	Distinct count of claim values (MC004)
18	% Records unknown from service date	M	> 5%	Count of records with from date of service (MC059) invalid or null	Count of all records
19	% Records w/no contract and no ESSN	M	> 0%	Count of records with encrypted contract number (MC008) null and encrypted subscriber social security number (MC007) null	Count of all records
20	% Records w/from service date 2 or more years old	M	> 5%	Count of records with from date of service (MC059) < processing date - 24 months	Count of all records

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
21	Ratio of MEMSSN to ESSN	M	> 3	Count of unique encrypted member social security numbers (MC010)	Count of unique encrypted subscriber social security numbers (MC007)
23	% Records w/gender = male	M	not between 20% and 80%	Count of records with gender (MC012) = M	Count of all records
24	% Records w/unknown gender	M	> 0%	Count of records with a gender (MC012) code = 'U' or null value	Count of all records
25	% Records w/relationship = subscriber	M	not between 20% and 80%	Count of records with relationship (MC011) = 20	Count of all records
26	Average age of dependent	M	not between 6 and 18	Sum of age for relationship (MC011) = 07,10,15,17,19,24,36,76	Count of records with relationship (MC011) = 07,10,15,17,19,24,36,76
27	Average age of member	M	> 60	Sum of age	Count of all records
30	% Records patient city missing	M	> 5%	Count of records with patient city (MC014) null	Count of all records
33	% Records unknown patient zip codes	M	> 10%	Count of records with patient zip code (MC016) invalid	Count of records with patient zip code (MC016) not null
34	% Records w/o patient zip code	M	> 3%	Count of records with patient zip code (MC016) null	Count of all records
35	% Records w/o patient state	M	> 5%	Count of records with patient state (MC015) null	Count of all records
36	% Records w/blank or invalid product	M	> 3%	Count of records with product code (MC003) invalid or null	Count of all records
37	% Records w/group number blank	M	> 0.1%	Count of records with group number (MC006) null	

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
38	% Records with age 65+ and not Medicare product	M	> 10%	Count of records with age > 64 and product (MC003) <> MA, MB	Count of all records
39	% Records w/date of birth < 1910 or date of birth > from date of service	M	> 3%	Count of records with date of birth (MC013) < 19100101 or date of birth (MC013) > from date of service (MC059)	Count of all records
40	% Records w/unknown relationship code	M	> 3%	Count of records with relationship (MC011) code = 21 or invalid	Count of all records
41	% Records w/unknown through date of service	M	> 5%	Count of records with thru date of service (MC060) invalid or null	Count of all records
42	% Records w/unknown paid date	M	> 1%	Count of records with date service approved (MC017) invalid or null	Count of all records
43	% Records w/unknown provider #	M	> 0.1%	Count of records with service provider number (MC024) invalid or null	Count of all records
44	% Records w/unknown provider name	M	> 0.1%	Count of records with service provider last name or organization name (MC030) invalid or null	Count of all records
45	% Records w/unknown provider taxid	M	> 5%	Count of records with service provider tax id (MC025) invalid or null	Count of all records
46	Ratio of provider number to provider name	M	not between 0.3 and 3	Count of unique service provider numbers (MC024)	Count of unique combination of service provider last name or organization name (MC030), service provider first name (MC028) and service provider middle name (MC029)
47	Ratio of distinct provider taxid to provider name	M	not between 0.3 and 3	Count of unique service provider tax ids (MC025)	Count of unique combination of service provider last name or organization name (MC030), service provider first name (MC028) and service provider middle name (MC029)

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
49	% Records w/ no provider zip code	M	> 5%	Count of records with service provider zip code (MC035) null	Count of all records
51	% Records w/ no provider specialty	M	> 35%	Count of records with service provider specialty (MC032) null	Count of all records
52	% Records w/ blank primary diagnosis	M	> 10%	Count of records with primary diagnosis (MC041) null	Count of all records
53	% Records w/ invalid primary diagnosis	M	> 10%	Count of records with primary diagnosis (MC041) code invalid	Count of all records
54	% Records with no plan or member payment	M	> 25%	Count of records with paid amount (MC063) = 0 or null and prepaid (MC064) = 0 or null and copay (MC065) = 0 or null and coinsurance (MC066) = 0 or null and deductible (MC067) = 0 or null	Count of all records
55	% Records w/ negative plan payments	M	> 5%	Count of records with plan paid amount (MC063) < 0	Count of all records
56	Ratio of total paid to charges	M	not between 0.2 and 1	Sum of plan paid amount (MC063) + prepaid (MC064) + copay (MC065) + coinsurance (MC066) + deductible (MC067)	Sum of charge amount (MC062)
57	Ratio of plan paid to charges	M	not between 0.2 and .95	Sum of plan paid amount (MC063) + prepaid (MC064)	Sum of charge amount (MC062)
58	Average total paid per claim line	M	not between $25 and $250	Sum of plan paid amount (MC063) + prepaid (MC064) + copay (MC065) + coinsurance (MC066) + deductible (MC067)	Count of all records
59	% Records w/ no member paid	M	> 75%	Count of records with copay (MC065) = 0 or null and coinsurance (MC066) = 0 or null and deductible (MC067) = 0 or null	Count of all records

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
60	% Records w/ negative $$	M	> 25%	Count of records with plan paid amount (MC063) < 0 or prepaid (MC064) < 0 or copay (MC065) < 0 or coinsurance (MC066) < 0 or deductible (MC067) < 0	Count of all records
61	% Records w/ no CPT code, revenue code or I9 procedure code	M	> 1%	Count of records with CPT (MC055) null and revenue (MC054) null and ICD-9-CM procedure (MC056) null	Count of all records
62	% Records w/ invalid CPT code	M	> 5%	Count of records with invalid CPT (MC055) code	Count of all records
63	% Records w/ I9 procedure code reported	M	> 15%	Count of records with valid ICD-9-CM procedure (MC056) code	Count of all records
64	% Records w/ invalid I9 procedure code	M	> 5%	Count of records with invalid ICD-9-CM procedure (MC056) code invalid	Count of all records
65	% Records w/ missing quantity	M	> 10%	Count of records with quantity (MC061) = 0 or null	Count of all records
66	% Inpatient records missing or unknown admit hour	M	> 10%	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with admit hour (MC019) invalid or null	Count of records for a claim where at least one claim line has type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239
67	% Inpatient records missing or unknown admit type	M	> 10%	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with admit type (MC020) invalid or null	Count of records for a claim where at least one claim line has type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239
68	% Inpatient records missing or unknown admit source	M	> 10%	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with admit source (MC021) invalid or null	Count of records for a claim where at least one claim line has type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
69	Total # inpatient records	M	N/A	Count of records for a claim where at least one claim line has type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239	
71	% Inpatient records with discharge status = home	M	< 50%	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with discharge status (MC023) = 01	Count of records for a claim where at least one claim line has type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239
72	% Inpatient records with discharge status = died	M	> 3%	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with discharge status (MC023) = 20	Count of records for a claim where at least one claim line has type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239
73	% Inpatient records missing discharge status	M	> 10%	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with discharge status (MC023) null	Count of records for a claim where at least one claim line has type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239
74	% Reversal	M	> 40%	Count of records with claim status (MC038) = 22	Count of all records
75	% Records w/invalid claims status	M	> 3%	Count of records with claims status (MC038) invalid or null	Count of all records
76	% Records w/negative quantity and positive $$	M	> 3%	Count of records with quantity (MC061) < 0 and (charge > 0 or paid amount (MC063) > 0 or plan paid amount (MC064) > 0 or prepaid (MC065) > 0 or copay (MC066) > 0 or coinsurance (MC067) > 0 or deductible (MC068) > 0)	Count of all records
77	% Records w/plan paid not equal to zero	M	> 3%	Count of records with paid amount <> 0 and prepaid amount <> 0	Count of all records

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
78	Ratio of total paid to charges for inpatient claims	M	not between 0.5 and 1	Sum of plan paid amount (MC063) + prepaid (MC064) + copay (MC065) + coinsurance (MC066) + deductible (MC067) for records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239)	Sum of charge amount (MC062) for records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239)
79	Ratio of total paid to charges for age 65+ records	M	not between 0.5 and 1	Sum of plan paid amount (MC063) + prepaid (MC064) + copay (MC065) + coinsurance (MC066) + deductible (MC067) for age > 64	Sum of charge amount (MC062)
80	Ratio of total paid to charges for age 65+ inpatient records	M	not between 0.5 and 1	Sum of plan paid amount (MC063) + prepaid (MC064) + copay (MC065) + coinsurance (MC066) + deductible (MC067) for records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and age > 64	Sum of charge amount (MC062) for records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and age > 64
81	% Records w/coinsurance < $1	M	> 1%	Count of records with coinsurance (MC066) > 0 and coinsurance (MC066) < 1	Count of records with coinsurance (MC066) not null
82	% 2+ type of bill for a single claim	M	> 1%	Count of records belonging to a claim that has 2 or more type of bill (MC036) values	Count of all records
100	Total # records type of bill is null	M	N/A	Count of records with type of bill (MC036) null	Count of all records
101	Total # records paid as secondary for age 65+	M	< 10%	Count of records with age > 64 and claim status (MC038) = 02, 03, 20, 21	Count of all records age > 64
102	% Members under 65 with Medicare	M	> 10%	Count of records with age < 65 and product (MC003) = MA, MB	Count of all records

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
121	% Inpatient records missing or unknown discharge hour	M	> 10%	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with discharge hour (MC022) is invalid or null	Count of records for a claim where at least one claim line has type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239
124	% Distinct NPI (NPRV) to distinct claims	M	TBD	Count of unique national service provider ID (MC026) codes	Count of unique claim numbers (MC004)
125	Ratio of distinct NPI (NPRV) to distinct provider numbers	M	TBD	Count of unique national service provider ID (MC026) codes	Count of unique service provider numbers (MC024)
128	% Records w/blank NPI	M	= 100%	Count of records with national service provider ID (MC026) null	Count of all records
130	% Records w/valid NPI	M	= 0%	Count of records with national service provider ID (MC026) code valid	Count of all records
132	% Records non Massachusetts member state	M	> 10%	Count of records with patient state (MC015) <> MA	Count of all records
133	% Records non Massachusetts member zip code	M	> 10%	Count of records with first five characters of patient zip code (MC016) not between 01001 and 02791 and <> 05501, 05544	Count of records with value patient zip code (MC016)
136	% Non Massachusetts providers	M	> 50%	Count of records with provider state (MC034) <> 'MA'	Count of records with provider state (MC034) not null
137	% Non Massachusetts provider zip codes	M	> 50%	Count of records with service provider zip code (MC035) not between 01001 and 02791 and <> 05501, 05544	Count of records with provider zip code (MC035) not null

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
139	% Inpatient records with invalid discharge status	M	> 5%	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with discharge status (MC023) invalid or null	Count of records for a claim where at least one claim line has type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239
140	% Records with member zip code not within member state	M	> 3%	Count of records with first five characters of patient zip code (MC016) not valid code within patient state (MC015)	Count of records with valid patient zip code (MC016) and valid patient state code (MC015)
153	% 2+ site of service for a single claim	M	> 1%	Count of records belonging to a claim that has 2 or more site of service (MC037) values	Count of all records
154	% Records w/type of bill = service site and service site is not null	M	> 1%	Count of records with bill type (MC036) = site of service (MC037) and site of service (MC037) is not null	Count of all records
155	% Records w/type of bill and service site are null	M	> 0.5%	Count of records with bill type (MC036) null and site of service (MC037) null	Count of all records
156	Total # records site of service is null	M	N/A	Count of records with site of service (MC037) null	

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
157	Total # records type of bill & site of service are null	M	N/A	Count of records with bill type (MC036) null and site of service (MC037) null	
158	% Existing Unique Providers	M	< 30%	Count of unique combination of provider number (MC024) and provider tax ID (MC025) and provider last name (MC026) and provider first name (MC027) and provider middle name (MC028) and provider suffix (MC029) and provider zip code (MC035) in NCDMS provider	Count of unique combination of provider number (MC024) and provider tax ID (MC025) and provider last name (MC026) and provider first name (MC027) and provider middle name (MC028) and provider suffix (MC029) and provider zip code (MC035)
159	%Newborn inpatient records w/age > 0	M	> 10%	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with age > 0 and (DX1 (MC041) = between V30 and V3999 or DX2 (MC042) = between V30 and V3999 or DX3 (MC043) = between V30 and V3999 or DX4 (MC044) = between V30 and V3999 or DX5 (MC045)= between V30 and V3999 or DX6 (MC046) = between V30 and V3999 or DX7 (MC047) = between V30 and V3999 or DX8 (MC048) = between V30 and V3999 or DX9 (MC049) = between V30 and V3999 or DX10 (MC050) = between V30 and V3999 or DX11 (MC051) = between V30 and V3999 or DX12 (MC052) = between V30 and V3999)	Count of records for a claim where at least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with (DX1 (MC041) = between V30 and V3999 or DX2 (MC042) = between V30 and V3999 or DX3 (MC043) = between V30 and V3999 or DX4 (MC044) = between V30 and V3999 or DX5 (MC045)= between V30 and V3999 or DX6 (MC046) = between V30 and V3999 or DX7 (MC047) = between V30 and V3999 or DX8 (MC048) = between V30 and V3999 or DX9 (MC049) = between V30 and V3999 or DX10 (MC050) = between V30 and V3999 or DX11 (MC051) = between V30 and V3999 or DX12 (MC052) = between V30 and V3999)
160	% Delivery inpatient	M	> 10%	Count of records for a claim where at least one	Count of records for a claim where at

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
	records w/ gender = male			claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with gender (MC012) = 1 and (DX1 (MC041) = between 630 and 67699 or DX2 (MC042) = between 630 and 67699 or DX3 (MC043) = between 630 and 67699 or DX4 (MC044) = between 630 and 67699 or DX5 (MC045)= between 630 and 67699 or DX6 (MC046) = between 630 and 67699 or DX7 (MC047) = between 630 and 67699 or DX8 (MC048) = between 630 and 67699 or DX9 (MC049) = between 630 and 67699 or DX10 (MC050) = between 630 and 67699 or DX11 (MC051) = between 630 and 67699 or DX12 (MC052) = between 630 and 67699)	least one claim line has (type of bill (MC036) = 11,21,41,42,51,52 or revenue code (MC054) between 110 and 239) and with (DX1 (MC041) = between 630 and 67699 or DX2 (MC042) = between 630 and 67699 or DX3 (MC043) = between 630 and 67699 or DX4 (MC044) = between 630 and 67699 or DX5 (MC045)= between 630 and 67699 or DX6 (MC046) = between 630 and 67699 or DX7 (MC047) = between 630 and 67699 or DX8 (MC048) = between 630 and 67699 or DX9 (MC049) = between 630 and 67699 or DX10 (MC050) = between 630 and 67699 or DX11 (MC051) = between 630 and 67699 or DX12 (MC052) = between 630 and 67699)
161	% Records with provider zip code not within provider state	M	> 10%	Count of records with first five characters of provider zip code (MC035) not valid code within provider state (MC034)	Count of records with valid provider zip code (MC035) and valid provider state code (MC034)
1	Total # records	P	N/A	Count of records	
5	Total # records with 65+	P	N/A	Count of records with age > 64	
12	Total # records - generic dependent code	P	N/A	Count of records with relationship (PC011) = 76	
13	Total # records - paid as secondary	P	N/A	Count of records with claim status (PC025) = 02, 03, 20, 21	
16	Average # lines per	P	> 10	Distinct count of claim values (PC004)	Count of all records

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
	claim				
17	Average # claims per member	P	> 15	Count of unique combination of encrypted subscriber social security number (PC007) and encrypted contract number (PC008) and date of birth (PC013)	Distinct count of claim values (PC004)
18	% Records unknown from service date	P	> 0%	Count of records with date filled (PC032) invalid or null	Count of all records
19	% Records w/no contract and no ESSN	P	> 0%	Contract number (PC008) is null and encrypted subscriber social security number (PC007) null	Count of all records
20	% Records w/from service date 2 or more years old	P	> 5%	Count of records with date prescription filled (PC032) < processing date - 24 months	Count of all records
21	Ratio of MEMSSN to ESSN	P	> 3%	Count of unique encrypted member social security numbers (PC010)	Count of unique encrypted subscriber social security numbers (PC007)
23	% Records w/gender = male	P	not between 20% and 80%	Count of records with gender (PC012) = 1	Count of all records
24	% Records w/unknown gender	P	> 3%	Count of records with a gender (PC012) code = U or null value	Count of all records
25	% Records w/relationship = subscriber	P	not between 20% and 80%	Count of records with relationship (PC011) = 20	Count of all records
26	Average age of dependent	P	not between 6 and 18	Sum of age for relationship (PC011) = 07,10,15,17,19,24,36,76	Count of records with relationship (PC011) = 07,10,15,17,19,24,36,76
27	Average age of member	P	> 60	Sum of age	Count of all records

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
30	% Records patient city missing	P	> 5%	Count of records with patient city (PC014) null	Count of all records
33	% Records unknown patient zip codes	P	> 10%	Count of records with patient zip code (PC016) invalid	Count of records with patient zip code (PC016) not null
34	% Records w/o patient zip code	P	> 3%	Count of records with patient zip code (PC016) null	Count of all records
35	% Records w/o patient state	P	> 5%	Count of records with patient state (PC015) null	Count of all records
36	% Records w/blank or invalid product	P	> 3%	Count of records with product code (PC003) invalid or null	Count of all records
37	% Records w/group number blank	P	> 0.1%	Count of records with group number (PC006) null	
39	% Records w/date of birth < 1910 or date of birth > from date of service	P	> 3%	Count of records with date of birth (PC013) < 19100101 or date of birth (PC013) > date prescription filled (PC032)	Count of all records
40	% Records w/unknown relationship code	P	> 3%	Count of records with relationship (PC011) code = 21 or invalid	Count of all records
42	% Records w/unknown paid date	P	> 1%	Count of records with date service approved (PC017) invalid or null	Count of all records
60	% Records w/ negative $$	P	> 25%	Count of records with plan paid amount (PC036) < 0 or copay (PC040) < 0 or coinsurance (PC041) < 0 or deductible (PC042) < 0	Count of all records
65	% Records w/ missing quantity	P	> 10%	Count of records with quantity dispensed (PC033) = 0 or null	Count of all records
74	% Reversal	P	> 40%	Count of records with claim status (PC025) = 22	Count of all records
86	Average total paid per script	P	N/A	Sum of plan paid amount (PC036) + copay (PC040) + coinsurance (PC041) + deductible (PC042)	Count of all records

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
87	% Records w/blank pharmacy	P	> 5%	Count of records with pharmacy number (PC019) null	Count of all records
88	% Records w/missing pharmacy name	P	> 5%	Count of records with pharmacy name (PC020) null	Count of all records
91	% Records w/unknown pharmacy zip code	P	> 10%	Count of records with pharmacy zip code (PC024) invalid	Count of all records with pharmacy zip code (PC024) not null
92	% Records w/blank NDC	P	> 0.1%	Count of records with drug code (PC026) null	Count of all records
94	% Records w/blank drug name	P	> 1%	Count of drug name (PC027) null	Count of all records
95	% Records w/days supply = 0	P	> 0.5%	Count of days supply (PC034) = 0 or null	Count of all records
96	% Records w/missing or invalid compound drug indicator	P	> 10%	Count of compound drug indicator (PC029) code invalid or null	Count of all records
97	% Records w/no plan or member payment	P	> 25%	Count of records with plan paid amount (PC036) = 0 or null and copay (PC040) = 0 or null and coinsurance (PC041) = 0 or null and deductible (PC042) = 0 or null	Count of all records
98	Ratio of total paid to charges	P	not between 0.2 and 1	Sum of plan paid amount (PC036) + copay (PC040) + coinsurance (PC041) + deductible (PC042)	Sum of charge amount (PC035)
99	% Records w/ no member paid	P	> 75%	Count of records with copay (PC040) = 0 or null and coinsurance (PC041) = 0 or null and deductible (PC042) = 0 or null	Count of all records
120	Average paid per claim	P	not between 15 and 250	Sum of plan paid amount (PC036) + copay (PC040) + coinsurance (PC041) + deductible (PC042)	Count of all records

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
126	% Distinct NPI to distinct claims	P	TBD	Count of unique national service provider ID (PC021) codes	Count of unique claim numbers (PC004)
127	Ratio of distinct NPI to distinct pharmacy codes	P	TBD	Count of unique national service provider ID (PC021) codes	Count of unique service provider numbers (PC004)
129	% Records w/blank NPI	P	= 100%	Count of records with national service provider ID (PC021) null	Count of all records
131	% Records w/valid NPI	P	= 0%	Count of records with national service provider ID (PC021) code valid	Count of all records
132	% Records non Massachusetts member state	P	> 10%	Count of records with patient state (PC015) <> MA	Count of all records
133	% Records non Massachusetts member zip code	P	> 10%	Count of records with first five characters of patient zip code (PC016) not between 01001 and 02791 and <> 05501, 05544	Count of records with valid patient zip code (PC016)
136	% Records w/Non Massachusetts pharmacy state code	P	> 50%	Count of records with pharmacy state code (PC023) <> MA	Count of records with pharmacy state code (PC023) not null
137	% Records w/Non Massachusetts pharmacy zip code	P	> 50%	Count of records with pharmacy zip code (PC024) not between 01001 and 02791 and <> 05501, 05544	Count of records with pharmacy zip code (PC024) not null
140	% Records with member zip code not within member state	P	> 3%	Count of records with first five characters of patient zip code (PC016) not valid code within patient state (PC015)	Count of records with valid patient zip code (PC016) and valid patient state code (PC015)
141	% Records with provider zip code not within provider state	P	> 10%	Count of records with first five characters of provider zip code (PC035) not valid code within provider state (PC034)	Count of records with valid provider zip code (PC035) and valid provider state code (PC034)

IDN	DESCRIPTION	File	Fail if	Numerator	Denominator
165	Ratio of plan paid to charges	P	not between 0.2 and 0.95	Sum of plan paid amount (PC036)	Sum of charge amount (PC035)

A sample frequency report appears at the end of this section. The frequency report will be generated for each submission that achieves LOAD/PASS and will be available on the web for the submitter to review and print. The top of the report indicates the name of the carrier and the system assigned payer id associated with the submission. This is followed by the system assigned file id number and the date the submission was received by NCDMS. Row 3 contains the name of the file and the submitter's payer code. Row 4 indicates the type of file (E = Eligibility, M = Medical, P = Pharmacy) and the type of date (P = Production, R = Replacement, T = Test). Row 5 contains the start and end month and year of the data evaluated. The start and end dates will not be equal if the submission contained more than one month of data.

The contents of the report columns are as follows:

- **DQ ID Result** – Edit number corresponding to the column labeled IDN in the data quality specification tables
- **Description** – English like description of edit corresponding to column labeled DESCRIPTION in the data quality specification tables
- **Calculated Value** – Count of records from numerator or % from numerator and denominator comparison

If a submission fails a data quality threshold check, a bold F will appear to the right of the calculated value.

Sample Data Quality Summary Report

Company: Carrier XYZ **Payer ID:** 999
File ID: 12345
File Name: MC00110936_200709001.TXT
File Type: M
Start Month: 200709

Date Received: 10/1/2007
Payer Code: XX9999
Data Type: P
End Month: 200709

DQ ID	Description	Calculated Value	Result
1	Total Records	2,478	
2	Medicare Products	0	
5	Records with 65+	94	
7	Records with 65+ Paid as Secondary	40	
12	Tot # Recs - Generic Dependent Code	0	
13	Tot # Recs - Paid as Secondary	56	
14	Tot # Recs Facility Type is NULL	735	
15	Tot # Recs Bill & Facility type are NULL	0	
16	Average # lines per claim >10	2	
17	Average # Claims per Member >15	2	
18	% Unknown first service date >5 %	0.0	
19	% Records with No Contract and No ESSN >0 %	0.0	
20	% First service date 2 or more years old >5 %	0.1	
21	Ratio of MEMSSN to ESSN >3	1.00	
23	% Male not between 20 and 80 %	45.6	
24	% Unknown Sex >3 %	0.0	
25	% Subscriber not between 20 and 80 %	49.0	
26	Average Age of Dependent not between 6 and 18	12	
27	Average Age of Member >60	41	
30	% Patient City Missing >5 %	0.0	
32	% Non NH Member Zip Codes >10 %	1.5	
33	% Unknown Patient Zip Codes >10 %	0.0	
34	% Records w/o Patient Zip >3 %	0.0	
35	% Records w/o Patient State >5 %	0.0	
36	% Blank or Invalid Product >3 %	0.0	
37	% Group Number Blank >0.1 %	0.0	
39	% DOB < 1910 or DOB > FDATE >3 %	0.0	

DQ ID	Description	Calculated Value	Result
40	% Unknown Relationship >3 %	0.0	
41	% Unknown Last service date >5 %	0.0	
42	% Unknown Paid Date >1 %	0.0	
43	% Unknown provider # >0.1 %	0.0	
44	% Unknown provider name >0.1 %	0.0	
45	% Unknown provider taxid >5 % 0.0		
46	Ratio of provider number to provider name not between 0.3 and 3	1.01	
47	Ratio of distinct provider taxid to provider name not between 0.3 and 3	0.52	
48	% Non MA providers >45 %	11.5	
49	% Records w/ no provider zip >5 %	0.0	
50	% Non MA provider zip codes >45 %	11.5	
51	%Records w/ no provider specialty >35 %	0.0	
52	% Records w/ blank primary DX >10 %	0.0	
53	% Records w/ invalid primary DX >10 %	0.8	
54	% Records with no Plan or Member payment >25 %	0.0	
55	%Records w/ negative plan payments >5 %	0.7	
56	Ratio of Plan + EE paid to Charges not between 0.2 and 1	0.55	
57	Ratio of plan paid to charges not between 0.2 and 0.95	0.52	
58	Average paid per claim not between 25 and 250	105	
59	%Records w/ no member paid >75 %	0.0	
60	% Records w/ negative $$ >25 %	0.7	
61	% Records w/ no CPT, REV or I9 OP >1 %	0.0	
62	% Records w/ unknown CPT >5 %	0.0	
63	% Records w/ I9 OP >15 %	3.3	
64	% Records w/ invalid I9 OP >5 %	0.0	
65	% Records w/ missing Qty >10 %	0.0	
66	% Records missing or unknown ADMHR >20 %	6.9	
67	% Records missing or unknown ADMTYPE >10 %	0.1	
68	% Records missing or unknown ADMSR >10 %	0.1	
69	Total # Inpatient Records	725	
70	% Records with invalid discharge status >5 %	0.0	
71	% Records discharged home <50 %	100.0	
72	% Records died >3 %	0.0	
73	% Records missing discharge status >10 %	0.1	
74	% Reversal >40 %	2.4	

DQ ID	Description	Calculated Value	Result
75	% Invalid Claims status >3 %	0.0	
76	% Negative QTY with positive $$ >3 %	0.0	
77	% TPAY <> 0 and PREPAID <>0 >3 %	0.0	
78	Ratio of Plan + EE paid to Chg for inpatient not between 0.5 and 1	0.88	
79	Ratio of Plan + EE paid to Chg for 65+ not between 0.5 and 1	0.62	
80	Ratio of Plan + EE paid to Chg for 65+ Inpatient not between 0.5 and 1	0.63	
81	% COINS < $1 >1 %	0.0	
82	% 2+ Bill type for a single claim >1 %	0.0	
83	% 2+ Facility Type for a single claim >1 %	1.0	**F**
84	% Billtype = Factype and Factype is not null >1 %	0.0	
85	% Billtype and Factype are null >0.5 %	0.0	
100	Tot # Recs Bill Type is NULL	1,743	
101	Paid as Secondary for Age 65+ <10 %	42.6	
102	% Members Under 65 with Medicare >10 %	0.0	
121	% Records missing or unknown DISHR >20 %	6.9	
123	% Existing Unique Providers <30 %	86.4	
124	% Distinct NPI (NPRV) to Distinct CLAIM	0.1	
125	Ratio Distinct NPI (NPRV) to Distinct PRV	0	

Confidentiality, Security and Data Encryption

Protected Health Information Security

Data and patient confidentiality are critical. With over 30 years in data management, MHIC has extensive experience working with confidentiality rules and guidelines. All proprietary databases maintained by the MHIC are governed by confidentiality agreements that include rules for access as defined by the owners of the data. This confidentiality is applied to all data structures and, more specifically, to protected health information. In addition to the encrypted fields that are collected, we have extensive security mechanisms in place and a demonstrated culture of confidentiality at our organization. All MHIC employees are required to sign a confidentiality agreement upon employment. Failure to adhere to the agreement results in automatic termination.

MHIC will not use data collected as part of this contract for any purpose other than stated in the contract without the express permission of the Council. MHIC takes full legal and ethical responsibility for the use, release, and disclosure of information. MHIC will provide immediate notification to the Commonwealth of Massachusetts in the event of any unauthorized release of protected information.

There are two subcontractors working with MHIC for the management of Massachusetts health care claims data: Masspro and the Massachusetts Health Data Consortium. As described below, Masspro will provide off-site co-location facilities for the complete NCDMS system. The Massachusetts Health Data Consortium will assist with communication throughout the life of the contract. While neither contractor roles require access to the data, the subcontracts contain language prohibiting their use of the data without the express permission of the Council.

Security – Physical

The building which houses the MHIC is protected by a security system that requires both a key to unlock the building and a keyed code to disarm the security system. The computer room door is locked at all times, has a numeric keypad, and has limited access. A smoke and fire alarm system is connected to the security system.

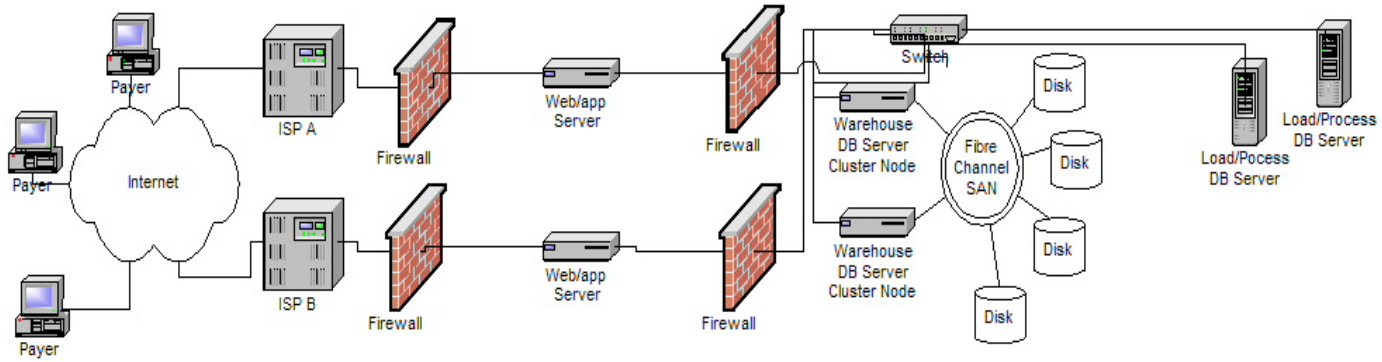
The MHIC uses a variety of strategies to protect databases. The primary strategies are:

1. The use of standby databases (mirrored, synchronized database on a second database server) to create a live backup that uses completely independent hardware.
2. Nightly logical database backups (full exports) which are done by piping the exports through a compression utility (gzip) to reduce the sizes of the files before they are stored to the high-performance local file system on the database server. MHIC then copies these backup files across a dedicated gigabit network to near-line storage. The near-line storage servers combine large amounts of hard drive storage with high-capacity tape drives. The most recent copies of all database server backups are copied to weekly tapes, which are moved to an off-site storage location.
3. Off-site co-location facilities for the entire NCDMS system are provided by Masspro.

Confidentiality, Security and Data Encryption

MHIC employs a multi-layer approach to security and at each layer every attempt is made to keep things simple and easy to monitor and maintain. The goal of this type of approach is to combine layers and components into an overall system that, when it fails, fails gracefully and safely. This approach can be partially compromised without failing completely, providing the administrator time to detect and respond to the problem.

Below is a visual example of NCDMS including our current data collection, processing and storage model.



Security and access to our systems starts at the reporter (payer) desktop using our encryption methodology.

Encryption

MHIC has developed a stand-alone one way data element encryption software that is run on the reporter's desktop before data is submitted to NCDMS. The encryption algorithm is a one way hashing algorithm using the industry standard SHA-512 protocol. SHA-512 is a computer security standard approved by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST), Information Technology Laboratory (ITL). It is one of four secure hash algorithms described in the Federal Information Processing Standards (FIPS) Publication 180-2, Secure Hash Standard. The algorithms are distinguished by the length of the field to be encrypted. According to FIPS Publication 180-2 "The four SHA algorithms specified in this standard are called secure because, for a given algorithm, it is computationally infeasible 1) to find a message that corresponds to a given message digest, or 2) to find two different messages that produce the same message digest. Any change to a message will, with a very high probability, result in a different message digest."

In addition to encrypting the patient identifiers: Subscriber Social Security Number (ME008,MC007,PC007), Member's Social Security Number (ME010,MC008,PC008), Subscriber Last Name (ME901,MC901,PC901), Subscriber First Name (ME902,MC902,PC902), Subscriber Middle Initial (ME903,MC903,PC903), Member Last Name (ME904),MC904,PC904), Member First Name (ME905,MC905,PC905) and Member Middle Initial (ME906,MC906),PC906), this application performs preliminary verification of standard file formatting, verifies some header and trailer data elements, and produces a zipped text file ready for submission through secure web upload or by being written to CD or DVD and mailed.

Providing encryption software that is run by every reporter ensures that all patient identifiers are encrypted consistently across reporters and eliminates the possibility that direct patient identifiers are submitted. Since the encryption is done at the carrier's site, the carrier can easily verify that the personal health identifiers passed through the encryption software have been have been removed and replaced with an unrecognizable, encrypted 128 character field.

The external portion of NCDMS (www.ncdms.org) includes the secure web portal used by the reporter (payer) and by authorized users.

Security – External Network

Administrative access to the servers is limited to a secure shell (SSH). Telnet, FTP, and a number of other services which allow username/password information to travel un-encrypted across the network have been removed or disabled. Access from the Internet is controlled through a firewall by defining narrow sets of ports and protocols which are needed to support the Web server functionality.

MHIC uses a single purpose machine for its web server while other servers handle key tasks such as Firewall, VPN, File Serving, and Mail so that services/daemons not needed to function as Web Servers can be removed or disabled. Limiting the number of services running helps to limit the number of potential exploits on the server. MHIC installs regular patches and updates to security-related software (OpenSSL).

The internal NCDMS runs on an internal web server and consists of a series of Oracle stored procedures for editing, processing, managing and storing the data. This is broken into two components:

1. Redundant load/processing database servers in the upper right of the diagram which have the editing and processing stored procedures on them and
2. Clustered redundant warehouse DB servers that are connected to a fibre channel SAN which is the final location of the aggregated claims data.

Security - Internal Network

Internal administrative access to the servers is also limited to a secure shell (SSH) even for access from internal clients. General access to the servers is limited by account and specifically to the areas needed to maintain the web applications. Access to the external database is limited by both client address and username/password. Furthermore, system and database accounts are limited to those people who have a need to access the system.

Oracle 10g Enterprise Edition is the SQL relational database structure for the data warehouse and for all intensive data processing activity. Database structure resides on partitioned and clustered Enterprise Edition of Oracle 10g in a data warehouse attached by redundant fiber-channel switching to a RAID configured scalable storage area network (SAN). We also maintain an Oracle 10g Standard Edition of summarized data in the external DMZ of our network for the many applications that require report data available through web interfacing, this instance of Oracle is also integrated with our SAN.

This extensive security allows us to recover client data in a timely fashion and warehouse data within a twenty-four window.

Disaster recovery services housed at a Massachusetts facility and include the following:

- A cold backup of NCDMS that interacts with the payers and accepts data submissions (the web/app server). Masspro will provide ISP services and bandwidth to process data in the case of a failure at our primary facility.
- A cold backup of NCDMS that processes data submissions (the DB load/processing servers).
- A warm backup of NCDMS that provides long-term storage for processed data (the database warehouse). This is considered warm because we will be exporting daily transactions logs to the Council and keeping it up to date.

The disaster plan will be tested yearly at the Masspro facilities.

Additional security, access and release policies and procedures help to further protect confidential health information.

Confidentiality, Security and Data Encryption

Secure Release and Audit

MHIC has standard procedures and policies in place that provide protection for secure receipt and/or release of information. In addition to our detailed security description provided we routinely provide the following functionality and compliance:

- Procedures that control access to secure information
- Security awareness and training for staff
- Logging and monitoring of access to data
- Procedures to respond to suspected or known security incidents.

These same procedures are applied in our handling of Massachusetts' dataset. In addition a logging mechanism will be used to accurately track the details associated with data release in conjunction with this contract. All MHIC response and reporting procedures will include designated Council staff where appropriate.

Data Access and Additional Requirements

The MHIC recognizes that the data belongs to the state of Massachusetts. MHIC may not use, release or grant access to any of the Council's data for any purposes other than those specifically authorized in the contract without the express written authorization of the Council. MHIC has a long, successful history of managing databases that are governed by similar restraints.

MHIC will comply with all state and federal laws in regards to Protected Health Information use and disclosure as will its subcontractors Masspro and the Massachusetts Health Data Consortium.

All carriers will be required to provide test submissions for each data set to be submitted. Large carriers with 2,000 or more Massachusetts covered lives will be required to test with one month of data. Smaller carriers with 200 to 1,999 Massachusetts covered lives will be required to test with one quarter of data. For carriers submitting both eligibility and claims data, the time period chosen for testing must be the same for all data sets. The test data set should not be a sample. It should contain the full complement of eligibility and/or claims data for that period.

Test submissions will be flagged as such by the submitter using the pull down menu on the web upload page. These submissions will be run through the full battery of data evaluation tools available. In addition to the system generated data checks described in section 1 and detailed in sections 3 and 4 of the statistical plan, MHIC staff will review the data for suspicious trends that are not readily exposed by the system.

The test phase often results in close communication between the MHIC staff and the submitter. In addition to identifying a problem, the MHIC may also be able to suggest its source and work with the carrier to resolve the issue. The test process frequently requires repeated submissions of the same data file as issues are resolved and new problems are introduced or identified. This process can also serve as a source for new data quality checks to be implemented system wide.

At the end of a successful submission of a test file that has passed all data quality checks, a carrier may request the MHIC to transform the test file into a production file. The change from test to production will not be done automatically. It must be requested by the carrier.

Submission of successful test files is required before production data may be submitted.

Below is a narrative describing the general flow of data through the system and the various check points for data evaluation.

NCDMS OVERVIEW

The National Claims Data Management System (NCDMS) has three main components – external, internal and tracking. The external portion of NCDMS (www.ncdms.org) includes the secure web portal used by the reporter and by Council and MHIC authorized users. There is also a non-secure portion of the NCDMS site with information that is publicly available. The internal NCDMS runs on an internal server and consists of a series of Oracle stored procedures for editing, processing, managing and storing the data. Tracker is the communication component that gathers information from each step in the process for system administration and determines the movement of the data through NCDMS.

WEB PORTAL

The external component appears as a web portal with a secure SSL web upload interface for carriers to submit and monitor data as well as a backend data management tool for tracking the status of each submission. After preparing the submission using the NCDMS encryption application, zipped files are uploaded through the secure web portal created for Massachusetts carriers. Using the web portal, the user (the reporter

or the MHIC staff person for submissions received via CD or DVD) indicates the type of submission (test, live data, replacement of live data) and the name of the file being submitted. Each uploaded submission is immediately acknowledged by NCDMS and the user is allowed to upload another file, check the status of submissions or log off.

PRELIM

The external component assigns a permanent unique file id that is used to track the stage and status of the submission as well as basic information regarding when it was submitted, the type of data, the submitter, the volume of records and the time span covered. During this PRELIM phase, the submission is unzipped and standard file level checking on the text file is performed. This includes validating date ranges, validating the submitter code, comparing the actual record count against the header record, and comparing the records against the file type indicated in the header. PRELIM fails the submission at the first occurrence of any PRELIM error and automatically emails the reporter that failure has occurred, the reason for the failure, the record containing the failure and a request for resubmission. Any file that has not been run through the encryption tool prior to submission will be failed by PRELIM.

LOAD

The internal system has three major phases – LOAD, TRANSFORMS and EDITS. In the LOAD phase the text file is loaded into Oracle and a text based Oracle view of the file is created. This step is necessary to accommodate data that fails to load due to incompatibility with the data type (e.g. alpha data in a numeric field). LOAD verifies the existence of critical data elements at a high level. This high level existence is programmable at the reporter level. For example, a medical claims submission with more than 10% of the records having a blank primary diagnosis code is a LOAD/FAIL condition. All thresholds are evaluated. In the event a submission fails one or more LOAD conditions, Tracker automatically emails the reporter the list of failures and requires a resubmission. Currently there are 9 eligibility, 20 medical and 15 pharmacy LOAD conditions. This list will be reviewed and updated, if necessary, in the Statistical Plan to meet the Council's needs.

FREQUENCY REPORTS

A frequency count is created for every data element to evaluate the percent of records with a null entry, a valid entry and with an invalid entry. The completeness percent, based upon records with a valid entry, is evaluated against the state approved threshold of tolerance for that data element. Any submission with one or more data elements failing the threshold test will be rejected. An email to the reporter containing a brief message indicating failure and a link to the web report for the entire submission will be automatically generated and sent by NCDMS. The statewide threshold is parameter driven and can be changed through NCDMS web pages available to the data managers. In the event that a reporter cannot meet the statewide threshold for one or more data elements, the Council may authorize a lower completeness threshold for a specified period of time. That reporter's data will be evaluated against the lower threshold for the allotted time span. The frequency report will be finalized within the Statistical Plan.

TRANSFORMS

TRANSFORMS populates value-added fields used in data element validation and in the data warehouse tables. The TRANSFORMS phase includes the setting of age, standardized product and relationship coding across data types, and drug categorization. Any standardization of submitted data occurs in a new field. All of the data submitted by the reporter is preserved as submitted unless the reporter and/or the state agency authorize the changing of submitted data.

EDITS

The EDITS module includes data verification checks to evaluate the validity and distribution of the individual data elements and to cross check the appropriateness of values in conjunction with other data contained in the same record. Edits have been designed for each data set submitted. The edits include cross checking data against national coding systems including, but not limited to, ICD-9 diagnoses, ICD-9 procedures, CPT and HCPC procedures, and NDC codes. EDITS also performs data quality checks to assess the inter-relationship of individual data elements and evaluate rates against parameter driven thresholds. For example, "M" is a valid gender code for males. A submission with 100% of the records coded as "M" will pass LOAD but will fail the data quality check that flags a submission with less than 20% of the records or more than 80% of the records coded as male. A submission passing all data quality threshold checks is marked as DQ/PASS and an email is automatically sent to the reporter indicating the submission is successful. Carriers are notified a submission is at DQ/REVIEW if it has failed one or more data quality thresholds and the data quality report is flagged for manual review.

DQ/REVIEW

DQ/REVIEW submissions are manually reviewed within 3 business days. Hands-on data mining is generally required for problems identified in these submissions. MHIC's intake specialists send a detailed email to the reporter regarding the problem and what research indicates may be causing the problem. The submission status is then set to DQ/FAIL. This initial email is often followed by conference calls to discuss reporter system issues and limitations, rule clarification, or other contributing factors. MHIC's information systems staff is a major participant in researching data problems, discussing options with the reporter and implementing customized system changes. These discussions may require MHIC to make corrections to the submitted data and the reporter to make changes in subsequent submissions or it may require the reporter to resubmit the data.

SUBMISSION STATUS TOOLS

The current status of each submission is maintained in an Oracle table that is viewable to the reporter from the reporter's web portal and from the MHIC's data manager's screens. The reporter may click on the "Report" button to see the detailed results. The frequency and data quality reports are accessible online to the carriers as well. Through NCDMS, Council staff may monitor the submission and editing process for NCDMS in general, as well as for any individual payer. This includes the ability to identify overdue submissions by data type and time period. Council staff will have direct access to all reports available to carriers.

AUXILIARY DATA QUALITY EVALUATION TOOLS

In addition to the processing and verifying of individual submissions, it is necessary to look at a submission in the context of all other submissions for that data period. Through NCDMS, the data manager has a series of software tools available to look at the database in total. These tools are used to identify duplicate submissions, duplicate records, unusual trends in record volume, unusual trends in payments, and data gaps. Because the insurance industry is an active market and there are so many variables to consider, MHIC has found it inappropriate to program automatic responses to many of the data situations uncovered by these reports. It has sometimes been more effective to identify patterns for specific carriers, make program adjustments for these patterns and continue to monitor the situation on a routine basis. These tools are used by the intake specialists. When an unusual problem is identified, the Director of Information Systems becomes involved in its resolution with the carrier.

RESUBMISSIONS

NCDMS also allows for the resubmission of the data and has a specific category of replacement data in the upload menu. A reporter that is replacing accepted data must indicate the type of data and the start and end date for the data before uploading. Data submitted by a reporter for a data type and time period that has already been accepted will be rejected as duplicate data unless the replacement submission procedures are followed. In those unusual situations where a subset of eligibility or claims records were omitted from the original filing, accommodations can be made with the MHIC staff to arrange for a supplemental submission to fill the gap of the missing data.

PRELIM, LOAD, frequency reports, TRANSFORMS, and EDITS are all NCDMS functions that are automatically performed within seconds or hours of the submission, depending upon the file size. DQ/REVIEW is a manual task completed by intake specialists within 3 business days of receipt.

Intake specialists are also responsible for manually flagging replaced submissions for system deletion. This flagging occurs as a data warehouse preparation task.

Unique Member Identification

There is no single field that will uniquely identify a member or patient across plans. Therefore, NCDMS will collect a number of encrypted member data elements and use these data elements to create a unique member number. Note that all encrypted fields are encrypted at the payer location and then submitted in an encrypted fashion.

The following data elements will be extracted from the eligibility and claims file to create a single record in the master member table. As indicated in the table below not all data elements submitted by the plans will be passed in the data warehouse to the Council. Those will only be used for the creation of the unique member id through probabilistic linkage along the lines of the algorithms used in creating a master patient index for an electronic medical record. However, since most direct personal health identifiers will be encrypted, there will be limitations as to how the linkage can be performed. For example, with an encrypted first name field it will be impossible to match the name Susan to the name Sue. Not all data elements will have the same weight in the assignment of the unique member ID number (MEMID).

Field Name	Eligibility	Medical Claims	Pharmacy Claims	Passed to Council?
Payer Code	ME001	MC001	PC001	Yes
Insured Group or Policy Number	ME006	MC006	PC006	Yes
Coverage Level Code	ME007	N/A	N/A	Yes
Encrypted Subscriber SSN	ME008	MC007	PC007	No
Encrypted Plan Specific Contract Number	ME009	MC008	PC008	No
Member Suffix or Sequence Number	ME010	MC009	PC009	Yes
Encrypted Member SSN	ME011	MC010	PC010	No
Individual Relationship to Subscriber	ME012	MC011	PC011	Yes
Member Gender	ME013	MC012	PC012	Yes
Member Date of Birth	ME014	MC013	PC013	Yes
Member City	ME015	MC014	PC014	Yes
Member State	ME016	MC015	PC015	Yes
Member Zip Code	ME017	MC016	PC016	Yes
Encrypted Subscriber Last Name	ME901	MC901	PC901	No
Encrypted Subscriber First Name	ME902	MC902	PC902	No
Encrypted Subscriber Middle Initial	ME903	MC903	PC903	No
Encrypted Member Last Name	ME904	MC904	PC904	No
Encrypted Member First Name	ME905	MC905	PC905	No
Encrypted Member Middle Initial	ME906	MC906	PC906	No

Unique Member Identification

A sequential number (MEMIDN) will be assigned to each entry in the master member table and that same number will also be stored in the eligibility and claims data warehouse tables. This will be the link to the unique member identification number assigned by NCDMS (MEMID). The Council will receive a table that contains a list of MEMIDNs and MEMIDs.

Provider Data

Provider information is reported redundantly within the medical and pharmacy claims data. NCDMS will replace the provider information with a unique provider record number that will link the claim to the provider service file. A provider record will be created for each unique combination of the following data elements:

Data Element	Medical Claims
Payer	MC001
Service Provider Number	MC024
Service Provider Tax ID Number	MC025
National Service Provider ID	MC026
Service Provider First Name	MC028
Service Provider Middle Name	MC029
Service Provider Last Name or Organization Name	MC030
Service Provider Zip Code	MC035
Service Provider Country Name	MC035A

Data Element	Pharmacy Claims
Payer	PC001
Pharmacy Number	PC018
Pharmacy Tax ID Number	PC019
Pharmacy Name	PC020
National Pharmacy ID Number	PC021
Pharmacy Zip Code	PC024
Pharmacy Country Name	PC024A

All provider data elements will be removed from the claims data sets and replaced with a sequential number (PRVIDN) that links the claim to the appropriate provider information. This will allow the Council to create and refine a unique provider identification number to link provider codes across payers without requiring the claims data to be reloaded with each refresh of the unique provider identification number.